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ABSTRACT

The final report covers the three phases of Project CAREER/Handicapped, the purpose of which was to design a system of coding behavioral objectives which would document the skills that could be attained by special needs students. Project objectives and procedures are discussed. The major results and accomplishments of the project include the following: (1) coding of 19,325 behavioral objectives, (2) utilization of three special needs consultants for every special needs area, (3) development of a battery of instruments which were utilized to evaluate the gains of the students, (4) establishment of several publications which documented project activities, (5) conducting a major conference on the application of the data bank for special needs students, (6) Presenting the purpose and programmatic functions of the project to major educational conferences, (7) conducting several inservice training sessions with the special needs consultants, (8) establishment of inservice training systems and a preservice graduate level course, (9) completion of a document which describes the rationale for coding, and (10) tentative analyses of the social needs coding with reference to the project data bank. An analysis of the pre-and post-data pertaining to the special needs students of three pilot programs is appended. (Author/EC)

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FINAL REPORT
Project CAREER/Handicapped

July 1, 1972 - September 30, 1974

Project #V261011
Contract #OEC-0-72-5170

Project CAREER/Career Development
Process for the Handicapped

Exemplary Project in Vocational Education

Conducted Under
Part D of Public Law 90-576

Vincent P. Lamo
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Project Administrator

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301 North Main Street
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September, 1974

Publication # 8003
Approved by Alfred C. Holland
State Purchasing Agent

9/74

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FINAL REPORT

Project No. V261011
Grant No. OEG-0-72-5170

Research and Development Project
in Career Education

Conducted Under
Part D of Public Law 90-576

The project reported herein was performed pursuant to a grant from the Bureau of Occupational and Adult Education, Office of Education, U.S. Department of Health, Education, and Welfare. Grantees undertaking such projects under Government sponsorship are encouraged to express freely their professional judgement in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

Vincent P. Lamo, Director
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301 North Main Street
Randolph, Massachusetts

September, 1974

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I. Summary of the Report

A. Period Covered - Phases I, II, and III
July 1, 1972 -- September 30, 1974

B. Goals and objectives of Project CAREER/Handicapped

Goals

1. Design a system of coding the behavioral objectives of the Parent Project (Project CAREER Development) which would document the skills that could be attained by Special Needs Population.

2. Demonstrate the value of the coded behavioral objectives in three Massachusetts pilot school systems.

Objectives

1. Develop and evaluate a career education curricula for the handicapped which will be implemented whenever possible in an integrated classroom setting.

2. Develop remediation procedures which would enable the handicapped students to perform specific occupational tasks.

3. Develop procedures which would demonstrate the necessity for involving representatives from the home, school, human service agencies, economic and manpower agencies, industry, local, municipal, and federal governments.

4. Develop placement and follow-up procedures which would demonstrate the viability of the career education curriculum.

5. Identify major in-service needs which would assist the LEA instructional staff to augment the Career Educational Process.

6. Identify pre-service needs which would increase the perspective of future vocational and special education teachers regarding career education for the handicapped.

7. Develop procedures for replicating the career education curricula within the remaining school districts in the Commonwealth.

The status of each of the above objectives is explained in a comprehensive fashion in the Body of the Report.

C. Procedures Followed -- Activities Designed to Implement Objectives

1. Development and Evaluation of A Career Education Curricula

The Project CAREER/Handicapped Central Staff designed a system of coding the behavioral objectives which were generated by the Parent Project. The coding was executed by having the consultants determine if the objectives were attainable as stated, attainable with equipment modification or not attainable.

The judgments were completed for 14 distinct areas of special needs students. The results of the coding produced the career educational curricula which were utilized in the three pilot school systems.

The above curricula were evaluated by the administration of four instruments. These instruments were designed to reveal any increment in the basic academic instruction as well as indicate any growth in understanding and acquiring the career education information.

The above curricula were introduced in an elementary, three junior high and three senior high special education classrooms. These students were integrated into the existing vocational and academic courses on a limited basis. The integration effort became a reality in the spring of '74.

2. Development of Remediation Procedures

The procedures which were enacted to accomplish this objective were that the pilot teams convened on a weekly basis to design lesson plans. The benefit of these planning sessions was that the personnel also focused on the particular problems of the students relative to the latter's attainment of the Project CAREER behavioral objectives.

The team members continuously refined their lesson plans and developed them in accordance with the individual learning style of each student. This refinement process ensured the development of remediation measures.

3. Involvement of Representatives from Many Disciplines

The procedures which were utilized to accomplish the objectives were as follows:

a. Recruitment of over 100 Special Needs Consultants who provided coding judgments

b. Development of three LEA Advisory Councils. Each council consisted of the following members:

1. School Administration
2. Industrial Representatives
3. Human Service Agencies
4. Parent Groups

The special needs consultants coded 19,325 behavioral objectives and the LEA Advisory Councils functioned throughout 1973-1974.

4. Development of Placement and Follow Up Procedures

Activities which were utilized for this objective were maintained at a minimum. The primary reason being is that the Parent Project had to have ample time to develop its data bank. The data was officially ready to be utilized in the 1973-1974 school year. Therefore, since the special needs students would only have one year to assimilate the data, placement and follow-up were actually "academic" in nature.

Even though the time span of experiencing the data was relatively short, the pilot school systems utilized "job sites" within the school system and community as creditable "hands-on" experiences. The feedback from their hands-on experiences were quite favorable and will be explained in more depth within the "Body of the Report."

5. Identification of Major In-Service Needs

The procedures which were utilized to accomplish the objectives were as follows:

Recruitment and utilization of a doctoral intern from the University of Massachusetts (Amherst) who taught the team personnel the basic knowledge of behavioral objectives. These orientation sessions were conducted during the 1972-1973 school year. The major incentive for the above personnel was that the teachers received three credits from the University of Massachusetts Division of Continuing Education.

In addition to the activities of the Resident Intern, the team personnel themselves devoted their time to "Spreading the Word" at various department and administrative meetings. Such liaison activities were quite useful relative to the acceptance of the Project CAREER Data Bank.

6. Identification of Pre-Service Needs

This objective was implemented by enactment of a summer course (July and August, 1973) at the University of Massachusetts (Amherst) campus. This course was designed to orient graduate students about the usefulness of the Project CAREER Data Bank and its unique applicability to special needs students. The course was quite successful and the students reacted most positively toward the implementation of the Project CAREER Data Bank for Special Needs Students.

7. Development of Procedures Which Could Be Utilized to Replicate The Data Bank

This objective was accomplished by the enactment of the following procedures:

a. Establishment of a significant publication relative to an explanation of Project CAREER/Handicapped.

The products are entitled as follows:

1. Analysis and Explanation of the Coding System
2. Theoretical Model for Special Needs Students
3. Suggested Models of a Career Education System for Special Needs Students

Additional products were developed and these will be documented in the "Body of the Report."

D. Results and Accomplishments

1. Coding of 19,325 Behavioral Objectives

These coding judgments were compiled from December, 1972 - September, 1974. During this time the 100+ Special Needs Consultants received extensive in-service training sessions and perfected their coding judgments.

2. Utilization of Three Special Needs Consultants for Every Special Needs Area

It was determined that there should be more objectivity relative to the coding judgments if three consultants coded each behavioral objective. The computer could then be programmed to determine if there was complete agreement or disagreement as to the final code. The process of these judgments became operational in November of 1973.

3. Development of a Battery of Instruments Which Were Utilized To Evaluate The Gains of the Students

This battery of instruments were composed of four testing devices which were designed to measure the academic and career education skills of the Special Needs Students. An explanation of the four instruments and the analysis of the Test Results will be explained in Appendix B.

4. Establishment of Several Publications Which Documented The Activities of Project CAREER/Handicapped

As noted above, the Project CAREER/Handicapped Central Staff developed several documents which explained the coding and pilot activities of the three school systems. A complete listing of these products will be cited in the "Body of the Report."

5. Conducted A Major Conference On The Application of the Data Bank for Special Needs Students

On June 17, the Project CAREER/Handicapped Central Staff and the Pilot Team Personnel conducted a conference at the Yankee Drummer Inn, Auburn, Massachusetts. The purpose of the conference was to orient educational leaders from the three regional areas which represented the pilot school systems. These three regional areas were: Boston, Worcester, and Springfield. Approximately 110 educators attended the conference. The general feedback from the personnel was that the conference was well received.

6. Presented the Purpose and Programmatic Functions of Project CAREER/Handicapped to Major Educational Conferences

These presentations were made at the following national, state and regional conferences:

National: Council of Exceptional Children
Dallas, Texas
April, 1972

State: Council of Exceptional Children
Boston, Massachusetts
June, 1973

Regional: Northeastern Regional Council
of Exceptional Children
Boston, Massachusetts
December, 1973

Regional: Part C & D Projects of Region I
Bedford, New Hampshire
March, 1973

A more detailed listing of such presentations will be cited in the "Body of the Report."

7. Conducted Several In-Service Training Sessions With The Special Needs Consultants

During December, 1972 - August, 1974 the Project CAREER/Handicapped Central Staff conducted three major in-service training sessions with the consultants. These sessions were devoted to the utilization of definitions for special needs areas, interpretation of the data for school systems and industry, internal consistency studies and examination of the definitions of different consultants for each special needs areas.

It is important to note that the three periods of in-service training occurred in the following time periods:

a. December, 1972 - June, 1973
b. July - September, 1973
c. May - August, 1974

As a result of their sessions the expertise and quality of the codes increased markedly and this information will also be expanded in the "Body of the Report".

8. Establishment of In-Service Training Systems and a Pre-Service Graduate Level Course

As noted above in the "Procedures Section", a doctoral intern was employed to provide in-service and pre-service courses during September, 1972 - August, 1973. The in-service courses were offered at the three pilot school systems during September, 1972 - June, 1973, and the pre-service courses were offered at the University of Massachusetts, Amherst campus during July - August, 1973. The team personnel and the graduate students each received three credits for the above course work.

9. Completion of a Document Which Describes the Rationale for Coding

The completion of the above document was of considerable importance because it provided interested educators and industrial representatives a comprehensive rationale as to how the new job options could be delineated. The document was prepared by Dr. Jack Tringo, Director, New England Special Education Instruction Materials Center, Boston University, Boston, Massachusetts

10. Tentative Analyses of the Special Needs Coding with Reference to the Project CAREER Data Bank

The Project CAREER/Handicapped Central Staff developed a significant document which explains the manner as to how the new career options would be realized. This document reveals the percentage of skills which could be attained by the 14 special needs areas and also indicate the percentage which could be attained by equipment modification and those skills considered non-attainable. The entire set of percentages will be further analyzed against a task outline of a specific occupation. The latter analyses will be most helpful in relation to a final determination of career options.

E. The evaluation activities for the grant period were conducted initially (July 1, 1972 - Novermber 15, 1972) by Psychometrics, and the remainder of the grant was reviewed by NEESI. Psychometric's Report was initially included in the Project's first Quarterly Report. NEESI's Report is included (Appendix A) in the Final Report.

F. Conclusions and Recommendations

Conclusions:

1. The Project CAREER Data Bank for Special Needs Students has proven to be an effective set of skills which has increased the career awareness, exploration and skill development of special needs students.

2. The composition of the team personnel: Occupational Resource Specialist, Academic Specialist, Special Needs Specialist, and a Vocational Education Specialist proved to be an effective multi-disciplinary staffing pattern.

3. The use of the four testing instruments proved to be a creditable battery of testing devices.

4. The special needs professionals throughout the country responded well to the activities and functions of Project CAREER/Handicapped.

5. The Massachusetts Division of Special Education has consistently supported and endorsed the efforts of Project CAREER/Handicapped.

6. The coding judgments proved to be an excellent guide for the team personnel in selecting career experiences for the Special Needs Students.

7. The LEA Advisory Councils responded well to their role in the support of the Handicapped Component within their own school system.

8. The special needs consultants who provided the coding judgments learned to improve the quality of their codes through the process of several in-service training sessions.

9. The special needs data can be documented in a form which is "transportable" to other school systems in the state as well as throughout the nation.

10. The coding system itself has been proven to be a process which will in effect suggest new career options for the special needs populations.

Recommendations

1. The special needs data should be "packaged" in a manner which is most convenient for educational and industrial representatives.

2. The coding process should undergo an intensive review by a panel of "Blue Ribbon" experts of the Special Needs Discipline. This panel will provide a national perspective of the coding process and suggest recommendations which would enhance the process.

3. The State Department of Education should promote grants to school systems who would utilize the Project CAREER Data Bank for Special Needs Students.

4. The staffing pattern which was utilized by Project CAREER/Handicapped should be attempted in a larger (25-50 school systems) throughout the Commonwealth.

5. A select group of industrial representatives from the 15 U.S.O.E. clusters should review the "attainable" skills, and "attainable with modification" skills with special needs representatives. This review process should underscore and validate the viability of new career options for special needs students.

6. A panel of engineering, electronics, physics, and aeronautics experts should be assembled to review the attainable skills with modifications and develop a manual of such modifications.

7. The skills judged non-attainable and those which were considered as (N) - "no consensus" - by the three consultants should be reviewed and discussed again by special needs consultants.

8. The "attainable skills" for each population should represent an operational definition for each special needs group.

9. The 100+ special needs consultants should be retained and their services continued during FY '75.

10. The State Board of Education, Commissioner Anrig's office, and the Secretary of Education's office should receive a final review of the impact of and "promise" of Project CAREER/Handicapped.

II. Body of the Report

A. Problem Area Toward which the Project was Directed

Project CAREER/Handicapped was funded to design a bank of information which would enable handicapped individuals to explore a variety of career options. These career options represent a decided break with the past - suggesting that a mentally retarded person could attain more skills than a "dish washer," that a blind person could attain more skills than a "newspaper vendor," and that a deaf person can attain more skills than a "printer." The general idea is that within the world of work, the belief that certain employment positions would always be performed by certain handicapped people is obsolete, archaic, and, in fact, debilitating.

Availability and exposure to new skills could become a reality to many handicapped persons. This same belief was recently reinforced by the federal government's passage of the Rehabilitation Amendments of 1973. Within this statute, there is a provision entitled the Affirmative Action Clause. This section "requires contractors doing business with the federal government in excess of $2,500 to hire and promote qualified handicapped individuals."[1] The reasoning behind this provision is stated as follows: "Since more than eight million contracts to more than 2.2 million contractors meet this criterion, and since each of those contractors must make special accommodations for the handicapped, there would seem to be a huge reservoir of employment slots."[2]

The direct message which is inherent in the above section is that the federal government has mandated that employment opportunities shall be made accessible to the handicapped population. The overriding issue is that the federal government believes that the handicapped population can become and function more in the economic main stream of our society of our society. Therein lies the similar belief of Project CAREER/Handicapped. In conclusion, Project

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[1] The President's Committee on the Employment of the Handicapped, Forging a Barrier Free Society, Twenty-Seventh Annual Meeting Report, May 2 - 4, 1974, Page 11.

[2] Ibid., Page 11.

CAREER/Handicapped directed its energies to the realization that the handicapped people are able to acquire more skills and this mission is exceedingly compatible with the intent and goal of the Affirmative Action Clause described above. Therefore, it is the hope of Project CAREER/Handicapped that the federal government will utilize its data to encourage the "contractors" to initiate more employment opportunities.

B. Goals and Objectives of Project CAREER/Handicapped

Goals

1. Design a system of coding the behavioral objectives of the Parent Project (Project CAREER Development) which would document the skills that could be attained by Special Needs Population.

2. Demonstrate the value of the coded behavioral objectives in three Massachusetts pilot school systems.

Objectives

1. Develop and evaluate a career education curricula for the handicapped which will be implemented whenever possible in an integrated classroom setting.

2. Develop remediation procedures which would enable the handicapped students to perform specific occupational tasks.

3. Develop procedures which would demonstrate the necessity for involving representatives from the home, school, human service agencies, economic and manpower agencies, industry, local, municipal, and federal governments.

4. Develop placement to follow up procedures which would demonstrate the viability of the career education curriculum.

5. Identify major in-service needs which would assist the LEA instructional staff to augment the Career Educational Process.

6. Identify pre-services needs which would increase the perspective of future vocational and special education teachers regarding career education for the handicapped.

7. Develop procedures for replicating the career education curricula within the remaining school districts in the Commonwealth.

The status of the above objectives is explained in a comprehensive fashion in the Body of the Report.

C. General Project Design and Procedures - July 1, 1972 - September 30, 1974

The entire Project focused on the attainment of the above seven objectives. A comprehensive report relating to the accomplishments of each of these objectives is as follows.

1. Design and Implementation of a Career Education Program for Special Needs Students

This objective was achieved by the abilities of the LEA teams to develop a bank of lesson plans which represented the Project CAREER data bank. It is critical to note at the outset that each LEA team was composed of a multi-disciplinary team. This fact assisted the team greatly in the design and implementation of the lesson plans.

Each LEA team consisted of the following personnel: occupational resource specialist, special education teacher, academic teacher and a vocational education teacher. The LEAs selected the above personnel, and throughout the entire project these teams functioned as the foundation of the entire career education effort.

During the fiscal year (July 1, 1972 - June 30, 1973, the teams focused on the following major objectives:

a. Understand the nature of the Project CAREER data bank.

b. Understand and utilize the value of the Special Needs Coding System.

c. Implement the Project CAREER data bank on a limited basis.

d. Design in conjunction with the Project CAREER/Handicapped central staff a lesson plan format.

e. Focus on the applicability of the 15 clusters for their particular classes.

f. Design and construct a career education resource center.

g. Solicit the names of appropriate people from industry, school system, civic groups, and state agencies, and parents who could function as a LEA Advisory Council.

h. Establish and implement the guiding principles related to the coding procedures.

The above objectives were achieved through the medium of several workshops, planning meetings, field visits, visitations to outstanding projects throughout the country and attendance at national conventions.

The intent and focus of the second year (1973 - 1974) was designed to accomplish the following objectives:

a. Design a comprehensive set of lesson plans which represented a group of marketable skills for each of the special needs classes.

b. Implement the plans noted in above (a).

c. Design a set of commonality lesson plans which focused on the awareness, exploration, and acquisition of general work skills which could be compatible to large groups of occupations.

d. Assist the Project CAREER/Handicapped central staff in the administration of a battery of instruments which would measure the impact of such lesson plans.

e. Implement the LEA Advisory Councils.

f. Expand the principles of coding and utilize a rigorous set of quality control systems.

The above objectives were also achieved through the same medium as noted for the first year. In conclusion, a set of career education plans were designed and implemented for the LEA special needs students and a complete evaluation pertaining to their effectiveness of such plans is noted in Appendix B.

2. Implement Remediation Efforts

The Remediation Efforts were designed in the weekly planning sessions which were conducted by the LEA teams. These remediation suggestions often focused on the ability of certain students to attain or unable to attain the particular career skill. The individual was always the central target of the planning sessions.

A direct manner by which the Remediation Procedures were effected was that the teams were able to expand the information on the 4-columns. In essence, the columns identified as "Pre-requisite Skills, Component Tasks, Environment, and Concepts," would have to be delineated further for the special needs students. Therefore, exposure to the Project CAREER data bank enabled the teams to seriously consider the "accessible" pre-requisite, component task, environmental resources, and concepts which could be attained by the special needs students.

3. Appropriate Utilization of LEA Advisory Councils

Each LEA developed their own Advisory Council in the second year and, in general, the Councils provided a valuable source of assistance regarding the support and endorsement of career education procedures for special needs students. The Councils represented people from: industry, school systems, civic groups, parents, and state agencies.

It is important to note that through these Councils the entire concept of career education was able to be understood by the community at large. These Councils promoted extensive media coverage, field trips to business establishments, visits of Council members to the career education resource centers, and active support for continuation of program in the Fiscal Year 1975.

4. Placement Follow-Up

Due to the fact that the students experienced the data for only one year, it was impossible for such students to acquire sufficient skills for employment. However, there were several examples

where the students participated in school-related tasks which continued and expanded their classroom training. Specific occasions where the latter opportunities occurred were as follows:

Milford - School cafeteria "assistance in preparing bag lunches"

Randolph - Mail room "assistance in sorting and delivering school mail"

Springfield - Community site - Pathmart (supermarket) "assistance in stocking shelves and bagging groceries"

The Project CAREER/Handicappped central staff designed a document which reflected the possible careers that special needs students could attain. This document (Appendix C) could definitely serve as a placement guide for the special needs populations.

5. In-Service Education

Availability of in-service education was accomplished by the employment of a resident intern. This person conducted mini courses at the three LEA sites. The courses were designed to offer the team an intensive understanding of behavioral objectives. The team personnel received three credits from the University of Massachusetts (Amherst) for their attendance and satisfactory performance in three courses. The critical issue is that the teams did require a thorough exposure to the use of behavioral objectives.

The latter educational medium is the substance of the Project CAREER data bank and, in general, the "rank and file" of teachers exhibit a minimum of understanding regarding the purpose and implementation of the behavioral objectives.

6. Pre-Service

Attainment of this objective was accomplished by the resident intern teaching a course to a class of graduate students. The class was entitled Career Education for Special Needs Students and the content of the course was based on the use of the

Project CAREER data bank.

The graduate students designed lesson plans based on the Project CAREER data bank. These plans were based on the same behavioral objectives that the teams utilized for the Fiscal Year 1974. Therefore, the graduate student's curricula were designed to enhance the plans developed by the team personnel.

The interesting feature about this objective was that the graduate students also possessed a minimum of knowledge regarding the philosophy of career education and the implementation of behavioral objectives. This issue has to be underscored if future special needs teachers are to be adequately prepared to utilize career education principles for special needs students.

7. Replication

The Project CAREER/Handicapped central staff developed a bank of publications which documented the activities for the two and one half years. These publications are entitled as follows:

Project CAREER Process as it Relates Particularly to Project CAREER/Handicapped, Presentation, 51st Annual Council of Exceptional Children Convention, April, 1973.

Career Education for Special Needs Students, Northeast Regional Council of Exceptional Children Convention, December 7, 1973.

Suggested Models of Implementing the Project CAREER Data Bank, March, 1974.

Analysis of the Coding for the Special Needs Population, March, 1974.

Explanation of the Project CAREER/Handicapped Coding Process, March, 1974.

Project CAREER's Coding for Special Needs Population, Presentation, National Rehabilitation Association, March 8, 1974.

Project CAREER's New Career Options for Individuals with Special Needs, April 30, 1974.

Project CAREER's Diagnostic Prescriptive Plan Leading to a Career Development Program for Special Needs Students, April 12, 1974.

Project CAREER's Pilot Implementation Program for Students with Special Needs in Randolph Public Schools, June 17, 1974.

Project CAREER's Pilot Implementation Program for Students with Special Needs in Milford Public Schools, June 17, 1974.

Project CAREER's Pilot Implementation Program for Students with Special Needs in Springfield Public Schools, June 17, 1974.

The Relationship Between the Project CAREER Data Bank and the Regulations for the Implementation of Chapter 766, September, 1974.

Any person who is inperested in reading or utilizing the data within the above publications are requested to contact the Director of Project CAREER:

Mr. Vincent P. Lamo
Director
Project CAREER
301 North Main Street
Randolph, Massachusetts 02368
(617) 963-8653

These publications would enhance the ability of school systems to utilize the Project CAREER data bank for special needs students.

D. Results and Accomplishments

The major results and accomplishments of the Project were as follows:

1. Coding of 19,325 behavioral objectives.
2. The development of 30 lesson plans which were based on the Project CAREER data bank.
3. The design and administration of a battery of tests which were utilized to measure the impact of the lesson plans.
4. The recruitment and training of 100 special needs consultants who provided the coding judgements.
5. Development of documents which relate the activities of Project CAREER/Handicapped to the Massachusetts Legislation - Chapter 766 (Comprehensive Special Education Statute).

6. Observance by the LEA teams that career education for special needs students is a national concern.

7. Utilization of local Advisory Councils regarding community support for career education for special needs students.

8. Delineation of new career options for special needs persons.

9. Development of a "Special Needs Package" which will be used in the impending Project CAREER workshops throughout the state.

10. Development of a document which supported the rationale and system of the coding process.

11. Conducted a major Educational Conference based on the Project CAREER data bank.

The overriding accomplishment was that the three LEA administrators have continued to support the principle of career education for special needs students. This fact is noted in Appendix D.

E. Evaluation

The complete Evaluation Report for the entire Project period is included in Appendix A.

F. Conclusions and Recommendations

1. The LEA staffing pattern represented an excellent choice of disciplines regarding the implementation of the Project CAREER data bank.

2. The Project CAREER data proved to be beneficial to the special needs students.

3. The Project CAREER data can be designed in a convenient and practical fashion.

4. The three pilot school systems should continue to use their fiscal and manpower resources to continue the career education programming for special needs students.

5. The State Department of Education should provide fiscal incentives to Massachusetts' School Systems to utilize the Project CAREER Special Needs Data Bank.

C. Implications

1. Teachers and graduate students require a comprehensive set of in-service training sessions on career education and the use of behavioral objectives.

2. The new career options which have been designed by Project CAREER/Handicapped should be made available to school systems and industrial representatives.

3. The special needs consultants who provided the coding judgements improved the quality of their codes and in effect utilized the career education principles within their own educational settings.

4. The special needs data can be packaged in a form which is easily accessible and feasible for other school systems in the country as well as the nation.

5. Career education procedures for special needs students is a methodology which is "here to stay" and should not be regarded as a temporary movement. The importance of career education transcends time.

APPENDIX A

Third Party Evaluator's Report

National Educational Evaluation Services, Inc.

(This document is provided under separate cover)

APPENDIX B

Analysis of the Pre and Post Data

Pertaining to the Pilot Schools' Special Needs Students

Final Five Class Summary of Project CAREER/Handicapped Pilot Programs Springfield, Milford, Randolph

A battery of four instruments were administered to the students in the Project CAREER/Handicapped pilot career education program on a pre-post test basis. The tests were given in hopes of gaining some information about movement in the classroom during the pilot efforts of using the Project CAREER performance objective data bank. The four tests covered three major areas: academic, self-esteem and occupational (awareness and preferences).

A complete description of the tests is included in a Project CAREER document entitled "The Project CAREER Diagnostic -- Prescriptive Plan Leading to a Career Development Program for Special Needs Students". Briefly, the tests in the battery are as follows:

1. Academic -- Wide Range Achievement Test

   A standardized achievement test

2. Self-esteem -- Coopersmith Self-Esteem Inventory

   A test whose orally read questions can be answered by either yes or no, and whose questions fall into four major categories: self, home, peers and school.

3. Occupational Awareness Test

   An oral response picture test in which the student answers four questions about each of 19 different occupations.

   a. What is this person doing?
   b. What is this person called?
   c. What else does this person do?
   d. Where does this person usually work?

4. Occupational Preference Test

   A timed drawing test in which the student is asked to draw up to a maximum of nine possible choices and to indicate his favorite occupational choice.

Because the administration of the battery of pre tests was not completed until approximately three months into the school year, the time span for the pilot program was of very short duration. The chances of movement occurring in the classroom during this shortened school year were lessened by the mere element of time, and must be taken into account when analyzing the results of the testing.

Twenty-five of the pilot students were selected for the pre-post testing rather than all the students in the classes because many students had only a partial battery of tests administered to them due to absenteeism and illness. Other students left school early at the end of year and were not available for post-testing. A statistical analysis of the data was not performed due to the group. It was anticipated that the five student samples from each class would be somewhat representative of the type of activity taking place in each class.

Academics

The Wide Range Achievement Test was not administered to the Randolph High School group, consequently the pre-post test scores reflect only the four other classes. Increases are recorded in the three sub-test areas with the classes moving from a high second grade level to a low third grade level. In comparison to this overall pilot academic achievement, the Randolph classes are well above the mean with the high school class pre test scores at the fourth and fifth grade level and the Randolph North Junior High School class scores at the high fourth and third grade levels. The Milford High School class scored below the average, and the lowest academic scores of all five classes, including the elementary class.

The movement in the total academic scores of the four classes combined, though less than a grade level, is probably quite commendable due to the short duration of the pilot. Academic skills were taught in relation to the prerequisites to performance objectives being explored by the various pilot classes. An effort was made to include teachers from other departments and many students were integrated into regular classes for their academic work. This approach of career related academics does not appear to hinder the acquisition of academic skills since the classes, in general, improved in thier post test scores on the WRAT.

Self-Esteem

According to the post test results of the Coopersmith Self-Esteem Inventory, the pilot classes increased in positive self image. The increase brought the average number of positive to 36 while the negative responses were 16. The Chestnut Junior High School class demonstrated the highest positive

post test self-esteem score (40, 10) with the Randolph High School class having the lowest at 25, 25. Responses from all of the classes exhibited a greater number of positive than negative responses. Interestingly enough, the class with the highest positive total self-esteem score (Chestnut Junior High School) also had the highest score in the school category (feelings about self in relation to teacher and school), and the class with the lowest self-esteem score (Randolph High School) had the lowest school score.

Occupational Awareness

The occupational awareness post test showed little movement during the pilot program. Only point increases and decreases in the four different questions were recorded with the decrease a one point from an excellent to a satisfactory response. The lack of any significant movement and, in fact, one and two point decreases in the post test, would lead one to question the value of such a test on a pre-post basis. The results of the one administration may be sufficient to plan a program to strengthen occupational knowledges in certain category areas such as understanding of job titles or environments.

The pilot programs did not cover all the clusters included in the pictures which could account for the lack of increases. The analysis may be better handled on a cluster or occupation basis rather than by the broad categories of job titles, tasks, etc., since the knowledges in one area may not be generalizable to other areas.

Occupational Preferences

In all the pilot programs except Spruce Street Elementary School, the students drew on the average of one less occupational preference in the post test than they had in the pre test. In addition, in all the pilot classes the occupations covered a greater number of clusters on the post test than on the pre test.

The quality of the drawings was measured by the number of environmental clues included and the portrayal of the person performing a job task. The quality, as the number of choices, appeared to have decreased on the post test. Both of these occurrences may possibly be explained as a result of the post testing taking place at such a late date. the students are understandably more restless and less anxious to perform during the last few days of school then during the earlier months.

The Dictionary of Occupational Titles assigns a "General Educational Development Scale Number" to all occupations listed in the DOT with one being the lowest and six the highest level. The levels are described in the supplement to

the DOT and explain the type of computational skills that are required by the various occupational levels. A G.E.D. level of 1-3 was considered to be a realistic level for most students with this type of special need. The pre and post results of the occupational preference test show students choosing occupations at the three level or above.

Project CAREER performance objectives are coded for the different special needs groups. By identifying the special need area and examining all the performance objectives for an occupation that are coded as attainable or attainable with modifications in that occupation. Some occupations previously considered to be out of the realm of possibility for special needs students may, in fact, open up to them. Perhaps the student cannot perform the complete job but enough tasks within the occupation to learn a new, distinct occupation or a part of an occupation.

Good vocational guidance and counseling, coupled with new career information such as the Project CAREER Data Bank, can help the special needs student realistically choose an appropriate occupational area.

Summary

Although the results of this testing battery cannot conclusively prove that the Project CAREER Data bank benefited the pilot students, positive movement was noted in the academic and self-esteem areas during the short duration of the program. Students learned prerequisites to performance objectives and, in some cases, achieved the actual performance objective. Some students are now considering employment in the occupational clusters to which they have been exposed and others have actually prepared for part-time positions in these occupational areas.

FINAL STUDENT EVALUATION Project CAREER/Handicapped

ID# 5 - Class Average

SCHOOL SYSTEM Randolph - Milford - Springfield

SCHOOL 2 - junior high schools, 2 - high schools, 1 elementary school

SPECIAL NEEDS AREA Educable Mentally Retarded

EXPOSURE TO Project CAREER DATA

A) CLUSTER Personal Services

Construction

Transportation

Business and Office

Marketing and Distribution

Health

B) PHASE OF CAREER EDUCATION

Awareness

Exploration

Skill Development

C) PRINCIPAL CLASSROOM ACTIVITIES

FINAL STUDENT EVALUATION Project CAREER/Handicapped

ID# 5 - Class Average

SCHOOL SYSTEM Randolph - Milford - Springfield

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B) PHASE OF CAREER EDUCATION

Awareness

Exploration

Skill Development

C) PRINCIPAL CLASSROOM ACTIVITIES

FINAL STUDENT EVALUATION p. 2

	PRE	POST	STATUS
WRAT			
Reading	2.7	3.1	Increase
Spelling	2.9	3.3	Increase
Arithmetic	2.8	3.3	Increase

COOPERSMITH SELF ESTEEM INVENTORY

	+		+		
Self	16	10	17	9	Slight increase
Peers	5	3	6	2	Slight increase
Home	5	3	6	2	Slight increase
School	5	3	5	3	No change
Lie Scale	5	3	4	4	Slight decrease
TOTAL	31	19	34	16	Increase

OCCUPATIONAL AWARENESS	+	✓		+	✓		
Question #1 ("What is this person doing?")	16	1	2	16	1	2	No change
Question #2 ("What is this person called?")	12	1	6	13	2	4	Slight increase
Question #3 ("What else does this person do?")	12	2	5	13	2	4	Slight increase
Question #4 ("Where does this person usually work?")	15	1	3	14	2	3	Slight decrease

OCCUPATIONAL PREFERENCE DRAWING TEST

	PRE	POST	STATUS
# of Drawings	7	6	Slight decrease
Favorite Occupation			
Other Occupations			
	1	1	No change
	4	3	Slight decrease
	1	2	Slight increase
Occupational Clusters	8	10	
Realism Quotients	(6) 0	(6) 0	No change
	(5) 1	(5) 1	No change
	(4) 1	(4) 2	Slight increase
	(3) 3	(3) 3	No change
	(2) 0	(2) 0	No change
	(1) 0	(1) 0	No change
	(Not Listed) 1	(Not Listed) 0	Slight decrease